

CLAIMS

1. Water disinfection device by ultraviolet radiation designed to be installed in an open channel (1) in a water disinfection installation by ultraviolet radiation in which the water to be disinfected flows
5 along a direction D, the said device including a plurality of longitudinal means (6) forming UV lamps each consisting of a UV lamp (6a), a protective cladding (6b) made from a material transparent to UV rays, and connectors arranged essentially longitudinally along the
10 said direction D and being distributed in a plurality of vertical modules (3), each module being composed of a beam (4) to which at least two means forming vertical supports (5) are fixed holding at least one series of the said means forming lamps (6) located under the said beam
15 (4) one above the other,

characterised in that the said means forming upstream supports are mounted in n separate planes (N, N', N'', etc.) essentially perpendicular to the said direction D, where n is more than 1.

20 2. Water disinfection device by ultraviolet radiation according to claim 1, characterised in that the said upstream ends of the said means (6) forming lamps are located in p separate planes (P, P') essentially perpendicular to the said direction D, where p is greater
25 than or equal to n.

3. Water disinfection device by ultraviolet radiation according to claim 1 or 2, characterised in

that all lamps (6a) of the said means forming lamps (6) have upstream ends located in a single upstream plane (P2) and downstream ends located in a single downstream plane (P2').

5 4. Water disinfection device by ultraviolet radiation according to any one of claims 1 to 3, characterised in that n and p are equal to 2.

5. Water disinfection device by ultraviolet radiation according to claim 4, characterised in that the
10 2 planes (N , N') essentially perpendicular to the said direction D are separated from each other by a distance of between about 5 cm and about 30 cm.

6. Water disinfection device by ultraviolet radiation according to any one of claims 1 to 5,
15 characterised in that the said means (6) forming lamps have all the same length.

7. Water disinfection device by ultraviolet radiation according to any one of claims 1 to 6,
characterised in that the c/c distance of the said means
20 (6) forming lamps is between about 6 and 15 cm.

8. Water disinfection device by ultraviolet radiation according to any one of claims 1 to 7,
characterised in that each of the said means (6) forming a lamp includes a cladding made from a material (6b)
25 transparent to UV rays with a diameter between about 2 and 6 cm.

9. Water disinfection device by ultraviolet radiation according to any one of claims 1 to 8,
characterised in that the beams (4) of the said modules

all have the same length and have upstream ends located in a single upstream transverse plane (P3) and downstream ends located in a single downstream transverse plane (P'3).

5 10. Water disinfection device by ultraviolet radiation according to any one of claims 1 to 9, characterised in that the upstream support means (5') are mounted in n planes (N1, N1') essentially perpendicular to the said direction D, where n is more than 1.

10 11. Water disinfection installation by ultraviolet radiation comprising an open channel (1) in which water to be disinfected flows along a direction D, characterised in that at least one device according to any one of claims 1 to 10 in which the means forming
15 upstream supports (5) of means forming lamps (6) are mounted in n separate planes (N, N') essentially perpendicular to the said direction D, where n is more than 1.